


Let Energy Star Light  
Your Way!

James Thomas

The image is a promotional graphic for Energy Star lighting. In the top left corner is the official Energy Star logo, which includes a stylized star and the words 'Energy' and 'ENERGY STAR'. The central text, 'Let Energy Star Light Your Way!', is written in a large, black, sans-serif font. Below this, the name 'James Thomas' appears in a smaller, black, sans-serif font. In the bottom right corner, the Sea Gull Lighting logo is displayed, featuring a white seagull silhouette and the brand name 'sea gull lighting®' in white lowercase letters. The background is a blue sky with wispy white clouds.

## **What is Energy Star? Government Back Symbol For Efficiency**



- Products Must Meet Strict Energy Efficient and Quality Standards**
- Standards are Third Party Tested and "Disqualified if they Do Not"**
- Has Become The Good Housekeeping Seal of Approval for Energy Efficiency**



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## **ENERGY STAR = Consumer Products** *Government Backed Symbol For Efficiency*

**"Over 40 Product Categories"**

**The average homeowner has over (25) appliances which consume power 24 / 7 all year!**

**Consumers should only look for Energy Star Products!**



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## **ENERGY STAR Lighting Requires 50 lumens per Watt**

**Think in Miles Per Gallon**

**Think Lumens Per Watt**

**Incandescent = 14.4 Lumens per Watt**

**CFLs = 70 Lumens per Watt**

**Would you buy a car that get 14 miles to the gallon or a car that gets 70 miles per gallon??**

## **Energy Star Lighting**



- **Lighting for CFL's is required to have Instant Start, with no flicker or hum**
- **Bulbs must have minimum life of 10,000 hours**
- **Fixtures use 75% less energy and generate 80% less heat than standard incandescent**
- **Lamp color must fall with warm color range 2700 to 3000K (as incandescent)**



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# Energy Star Lighting



- Requires outdoor incandescent fixtures to have photocells for "dusk to dawn" operation. This eliminates wasteful daytime operation
- CFL's for New Construction must be pin-based (Hard Wired)
- Ceiling Fans are up to 50% more efficient than standard fans



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## Typical CFL Fixtures Available for New Construction

- Must use pin-based bulbs
- Start in < 1 Second
- Have a CCT = 2700 – 6500 K
- Provide 80+ CRI  
(Color Rendering Index)
- Proven Lumen Maintenance of > 80% at 40% of Rated Life



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## ***Outdoor Fixtures***

- **All of the Above**
  - Must use pin based bulbs
  - Start in < 1 Second
  - Have a CCT = 2700 – 6500 K
  - Provide 80 + CRI
  - Prove Lumen Maintenance of > 80% at 40% of Rated Life
- **Plus**
  - Ship with Photocell
  - Start Temp. Improvement to handle below freezing



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## ***Energy Star Ceiling Fans***

- Airflow (CFM) requirements
- Have separate speed and lighting controls
- Operate at more than one speed
- Are capable of working in forward and reverse.
- Third Party Laboratory Verified
- 30+ Year motor & 2+ Year light kit warranty



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## Consumer Benefits

Instant on  
75% Less Energy Consumed  
10 X Bulb Life .....  
80% Less Heat .....  
Persistent Savings



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## Homeowner Mathematics 101

The Average Home has 30 Light Fixtures (2 Bulb)  
At 3.5 Hours of Use and \$.18/kWh



—Incandescent = \$828  
 —ENERGY STAR = \$179  
 —Savings / Year = \$649

—Plus AC Savings = \$214  
 —Total Savings / Year = \$863

At a 5 Year bulb replacement that's = \$4315  
 With a New Construction cost of \$900.00 in upgraded light fixtures



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## Other Big Box Stores to Follow.



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[illegible]

# “Dark-Sky” Solutions

## Energy Star

### CA Title 24



**0069** **Journal of Interpersonal Violence**, 2017, Vol. 32, No. 18, pp. 1-12  
DOI: 10.1177/0886260517717101



## **California Title 24**

### **All New Construction must have hard wire CFL Light Fixtures!**

- **Kitchens; At least 50% of total wattage of lighting must come from high efficacy lighting. Low efficacy must be switched separately.**
- **Recessed 26 Watt Cans & Fluorescent under counters, the Normal Usage**



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## **Title 24**

### **Bathrooms, Utility, Garage and Laundry Room**

- High Efficacy lighting or manual-on occupancy sensors (motion sensors)



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## Title 24 Exterior

- Lighting that is attached to the home (building) must be high efficacy (CFL's) or a combination photo sensor / motion sensor



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## Title 24 All Other Spaces

- Typical Halls, Foyer, Dining, Bedrooms & Closets
- High Efficacy Lighting, Occupancy Sensors or Dimmers are required
- Typically the builders are using incandescent fixtures with Dimmers.



## Title 24 Recessed Lighting

- Must be IC Rated for insulated covered attics
- Must be Airtight for the can and have a gasket for the trim



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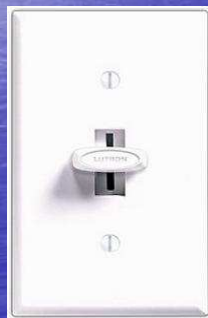


## *New Technology*



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**Dimming the Bulb or the Fixture**  
**RLF Circlelines are active**  
**T8's and electronic ballast are active**  
**CFL's on the very near future**



# Xenon Long Life Lamps


- 150,000 hours rated lamp life
- 2390 Kevin Rating
- Dimmable
- 6.3 watts / 23 Volts per Lamp
- Great for under-counters, high ceilings & hard to reach areas



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LONG LIFE LAMP (XENON)

| BULB   | ITEM NUMBER | BULB TYPE | BASE TYPE | VOLTS | WATTS CONSUMED | RATED LIFE AVG. HRS | APPROX LIGHT (LUMENS) | APPROX COLOR TEMP (°K) |
|--|-------------|-----------|-----------|-------|----------------|---------------------|-----------------------|------------------------|
| <br>Festoon | 97122-33    | T3        | Festoon   | 23    | 6.3            | 150,000             | 40                    | 2390                   |
|  |             |           |           | 24    | 6.7            | 95,000              | 46                    | 2420                   |
|  |             |           |           | 26    | 7.6            | 35,000              | 60                    | 2490                   |
|  |             |           |           | 28    | 8.5            | 15,000              | 78                    | 2550                   |

Light bulb data based on manufacturers information recalculated at approximately 23, 24, 26, 28 volts.

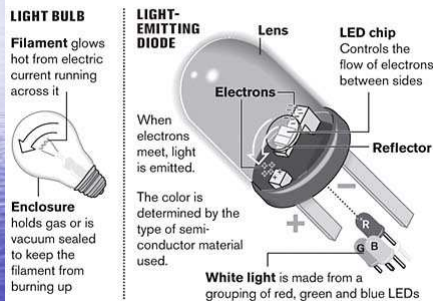


# LEDs

## The Good News

### Light bulbs vs. LEDs

Light-emitting diodes, or LEDs, are slowly coming into homes as a replacement for light bulbs. Solid-state LEDs are more durable, longer-lasting and brighter than light bulbs, which are vulnerable to vibration.



Sources: Arizona Collaborative for Excellence in Preparation of Teachers;  
U.S. Department of Energy



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# LEDs

## White Light-Emitting-Diodes

- **LEDs can save 50 to 80% over incandescent**
- **LEDs are a solid state light source covering the gamut of color temperatures and intensities**
- **White LEDs are the style that is slowly working into the Residential side of Lighting**
- **Little heat and withstands Vibration**
- **Typical applications**
- **Over & Under Cabinets**
- **Stairs**
- **Wall Washing**
- **Landscape Lighting**



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## **LEDs The Bad News**

- **To Expensive**
- **Few selections of fixtures on the market**
- **Energy Star does mandate the technology**
- **CA Title 24 does not recognize the technology as a requirement**



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## **Who Is Sea Gull Lighting**

- **-A leading manufacturer of decorative, functional and specialty indoor and outdoor lighting products.**
- **-An 87 year old family operated business specializing in Residential Builder Business.**
- **Over 3,000 fixtures with 40 different families of matching fixtures.**



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**sea gull lighting®**

**-Energy Efficient Products including  
Title 24 for California, CFL's, Dark  
Skies, Xenon Technology and  
Dimming RLF's.  
LED's & Dimming CFL's are  
Up & Coming!**



**sea gull lighting®**

**Thank You**

**Any Questions**